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ABSTRACT

This booklet lists oceanography information sources in the first section under industries, laboratories and departments of oceanography, and other organizations which can provide free information and materials describing programs and activities. Publications listed in the second section include these educational materials: bibliographies, career information, curricula information, films and filmstrips, kits, laboratory programs, and general inquiries. The final listing of publications includes reference lists, directories, compilations of information, journals, bulletins, newsletters, periodicals, reports of the National Academy of Sciences-National Research Council, and general coverage magazines and newsletters. (PR)

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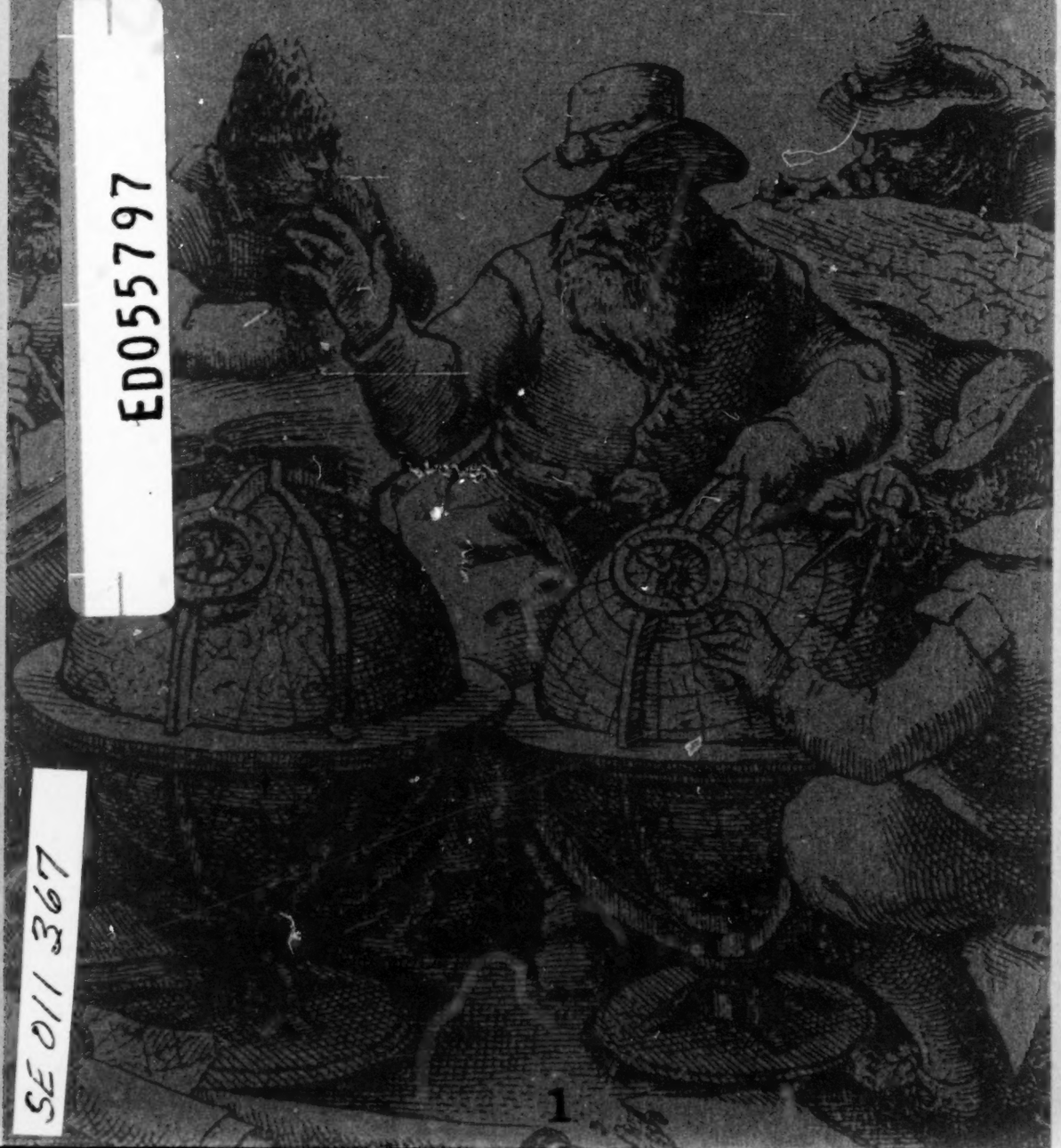
NATIONAL ACADEMY OF SCIENCES



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Oceanography
Information Sources | 70

A Staff Report of the
COMMITTEE ON OCEANOGRAPHY
Division of Earth Sciences
National Research Council

Compiled by RICHARD C. VETTER

NATIONAL ACADEMY OF SCIENCES | Washington, D.C. 1970

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Detail from an illustration showing how navigation was taught in a seventeenth century Dutch school of navigation from *The Light of Navigation* by Blaeu, 1622

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PREFACE

This collection of sources of information about oceanography is compiled for teachers, students, and the many others interested in this complex, interesting, and recently popular subject. It combines two pamphlets printed in July and November 1965 that were used to answer the many inquiries received by the Committee on Oceanography of the National Academy of Sciences.

This book divides "sources" into *places* to which one can write in search of information and *publications* that can be found in libraries or obtained through the mail. Many of the publications listed are available from the places listed. To reduce the bulk of this book, abbreviations of places are used extensively in the section on publications; the reader should check the places section for complete addresses.

Most of the agencies, laboratories, and organizations listed in the first section will provide free material describing their programs and activities. However, please *do not* send form letters asking for "everything you have about oceanography." Some, including this writer, respond only reluctantly, if at all, to such requests. Personal letters, describing the writer's particular field of interest, stating what he plans to do with the information requested, and saying that he has at least checked the references in his local library before resorting to stamp and pen, will get better results.

Comments on the usefulness of the listings in this book and suggestions for additions or deletions will be appreciated.

Thanks are due to the many individuals who verified or corrected the entries for their organizations and to those listed below

who have added to the usefulness of this compilation by helpful suggestions, additions, and criticism.

John Dermody
Mary Sears
Dick Rigby
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Fred Spilhaus
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This book was prepared as a staff activity of the Committee on Oceanography, National Academy of Sciences–National Research Council. The Committee operates under the joint sponsorship of the Office of Naval Research, the Atomic Energy Commission, the Department of the Interior, the National Science Foundation, the Environmental Science Services Administration, and the U.S. Coast Guard.

RICHARD C. VETTER
Executive Secretary
Committee on Oceanography

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SECTION I

PLACES

INDUSTRIES

The 1967 edition of this book contained the addresses of more than 180 industries with oceanographic interests. Today, a truly comprehensive list would contain at least twice as many names. In fact, several such tabulations have been prepared,* including the following:

Hydrospace Buyers Guide
Oceanology International Yearbook/Directory
Ocean Master
Offshore Drilling & Construction Contractor's Directory
UST Handbook
World Space Directory

The pages that follow omit many major industries that have a relatively small direct involvement in oceanography and highlight others that are heavily committed in this field. While this compilation is not a "Who's Who" in ocean industry, it does list many of the small, specialized ocean industries and most of the larger industries.

*See Publications Section for addresses, prices, etc.

2 OCEANOGRAPHIC INFORMATION SOURCES

A

ACCO-AMERICAN CHAIN & CABLE COMPANY, 1110 East Princess Street, York, Pa. 17403.
Engineering and oceanographic material handling equipment.

AEROJET-GENERAL CORPORATION, Von Karman Center, 1100 W. Hollyvale Ave., Azusa, Calif. 91702.
Underwater vehicles, acoustic systems.

ALPINE GEOPHYSICAL ASSOCIATES, 64 Oak St., Norwood, N.J. 07648.
Oceanographic and geophysical instruments; research and surveys.

ALUMINUM COMPANY OF AMERICA, 1501 Alcoa Building, Pittsburgh, Pa. 15219.
Aluminum products for ocean science and industry.

AMERICAN MACHINE AND FOUNDRY COMPANY, Alexandria Division, 1025 Royal St., Alexandria, Va. 22314.
Acoustic command systems, pingers, navigation transponders, directional hydrophones.

APPLIED OCEANOGRAPHICS, INC., 5055 N. Harbor Drive, San Diego, Calif. 92106.

AQUATIC SCIENCES, INC., 2624 N.W. 2nd Ave., Boca Raton, Florida 33432.
Research in ecology, physiology, genetics and biology.

ARMCO CORPORATION, Middletown, Ohio 45042.
Steels and steel products for ocean industries.

ATLANTIS, 9015 Wilshire Blvd., Beverly Hills, Calif. 90211.
Development of offshore and materials handling equipment and systems.

B

BALL BROTHERS COMPANY, INC., Muncie, Ind. 47305.
Plastic and glass containers.

BARNES ENGINEERING COMPANY, 30 Commerce Rd., Stamford, Conn. 06902.
Remote temperature measurement instruments.

BECKMAN INSTRUMENTS, INC., 2500 Harbor Blvd., Fullerton, Calif. 92634.
Instruments, systems and components for analysis, measurement and control.

BECHTEL CORPORATION, P.O. Box 3965, San Francisco, Calif. 94119.
Economic and feasibility studies, marine engineering design and construction.

BENTHOS, INC., Edgerton Drive, North Falmouth, Mass. 02556.
Instruments, hardware, pressure testing service, engineering.

BISSETT-BERMAN CORPORATION
2941 Nebraska Ave., Santa Monica, Calif. 90404.
3939 Ruffin Rd., San Diego, Calif. 92123.
Instruments and systems for laboratories, ships and buoys.

BOLT BERANEK AND NEWMAN, INC., 50 Moulton St., Cambridge, Mass. 02138.
Naval systems, acoustics, marine structures, and vehicles.

BOSTON INSULATED WIRE AND CABLE COMPANY, 65 Bay St., Boston, Mass. 02125.
Cables for instrumentation, control and power.

BRAINCON CORPORATION, Division of General Time Corp., Box 26, Shenandoah Rd., Marion, Mass. 02738.
Instruments and vehicles; design and consulting services.

C

CHESAPEAKE INSTRUMENT CORPORATION, Shadyside, Md. 20867.
Instrument development, engineering and manufacture.

CM^2, INC., 193 Constitution Drive, Menlo Park, Calif. 94025.
Oceanographic and limnological instrumentation; U.S. agent for Tsurumi Precision Instrument Co., Yokohama, Japan.

COLUMBIAN ROPE COMPANY, 309 Genesee St., Auburn, N.Y. 13021.
Synthetic and vegetable fiber cordage products.

CORNING GLASS WORKS, Houghton Park, Corning, N.Y. 14832.
Flotation materials, pressure cases, massive glass structures, glass components.

D

DEL MONTE PACKING CORPORATION, 215 Fremont St., San Francisco, Calif. 94119.
Harvesting ocean's living resources.

DOW CHEMICAL COMPANY, Government Affairs Department, Bldg. 566, Midland, Mich. 48640.
Chemicals, metals, plastics and pharmaceuticals.

E

EARTH SCIENCE RESEARCH, P.O. Box 5427, Santa Monica, Calif. 90405.
Telemetry equipment and systems.

EDO WESTERN CORPORATION, 2645 South 2nd West, Salt Lake City, Utah 84115.
Equipment, transducers, and hydrophones for sale or lease.

EG&G INTERNATIONAL, Geodyne Division, 151 Bear Hill Road, Waltham, Mass. 02154.
Measuring; photographic, seismic and acoustic systems; offshore geophysical survey services.

ENGINEERING-SCIENCE, INC., Zurn Corporation, 4316 Telegraph Ave., Oakland, Calif. 94609.
Surveys, feasibility studies, pollution control and engineering.

F

FLOY TAG & MANUFACTURING, INC., 2909 Northeast Blakely St., Seattle, Wash. 98105.
Fish tagging equipment.

FMC CORPORATION, 1105 Coleman Ave., San Jose, Calif. 95110.
Oceanic activities, recovery, and salvage.

G

GENERAL DYNAMICS CORPORATION
Electric Boat Division, Eastern Point Rd., Groton, Conn. 06340.
Marine Technology Center, 2930 N. Harbor Dr., San Diego, Calif. 92101.
Nuclear-powered submarines, marine systems, undersea vehicles, buoys.

GENERAL ELECTRIC COMPANY, Electric Systems Division, Syracuse, N.Y. 13201.
Undersea warfare and radar systems.

GENERAL INSTRUMENT CORP., Harris ASW Div., 33 S.W. Park, Westwood, Mass. 02090.
Transducers, sonars, bottom charting, acoustic navigation, echo sounders.

GENERAL MOTORS CORP., AC Electronics Defense Research Laboratories, Goleta, Calif. 93017.
Underwater acoustics, dynamic ship positioning, deep submersibles, and drill hole re-entry.

GEOTECHNICAL CORP., Div. of Teledyne, 3401 Shiloh Rd., Garland, Tex. 75041.
Instruments and systems to detect and analyze low level signals.

GLOBAL MARINE, INC., 650 S. Grand Ave., Los Angeles, Calif. 90017.
Naval architects, marine design engineers, marine geologists.

GM MANUFACTURING AND INSTRUMENT CORP., 2417 3rd Ave., Bronx, N.Y. 10451.
Oceanographic equipment and instruments.

B.F. GOODRICH CO., Marine Products, 500 S. Main St., Akron, Ohio 44314.
Rubber and reinforced plastic products for underwater sound applications, anti-fouling materials.

GOODYEAR AEROSPACE CORP., 1210 Massillon Rd., Akron, Ohio 44315.
Anti-submarine warfare, sonar signal processing, acoustic imagery.

GRUMMAN AIRCRAFT ENGINEERING CORP., Bethpage, Long Island, N.Y. 11714.
Research submersibles, hydrofoils.

H

HASTINGS-RAYDIST, INC., Div. of Teledyne, Newcomb Ave., Hampton, Va. 23361.
Radiolocation and positioning systems.

HAZELTINE CORP., Electro-Acoustic Systems Laboratory, 190 Forbes Rd., Braintree, Mass. 02184.
Electro-acoustic products and services.

HERCULES INC., Explosives and Chemical Propulsion Dept., 900 Market St., Wilmington, Del. 19899.
Explosives, detonators, blasting supplies, propellants, chemical propulsors.

HONEYWELL, INC., Marine Systems Center, 5303 Shilshole Ave., N.W., Seattle, Wash. 98107.
Subsurface profilers, acoustic positioning systems, acoustic transducers.

HYDRO PRODUCTS, Division of Dillingham Corp., 11803 Sorrento Valley Rd., San Diego, Calif. 92121.
Underwater TV, photographic equipment, buoys, sampling devices.

HYDRO-SPACE RESEARCH CORP., 5541 Nicholson, Rockville, Md. 20852.
Acoustics, hydrodynamics, anti-submarine warfare, and applied oceanography.

HYDRO-SPACE SYSTEMS CORPORATION, 810 First Ave., N.E., Cedar Rapids, Iowa 52402.
Engineering instrument manufacture.

I

INNERSPACE TECHNOLOGY, INC., 27 Frederick St., Waldwick, N.J. 07463.
Management studies.

INTER OCEAN SYSTEMS, INC., 3446 Kurtz St., San Diego, Calif. 92110.
Management studies.

THE INTERNATIONAL NICKEL CO., INC., Francis L. LaQue Corrosion Laboratory, P.O. Box 656, Wrightsville Beach, N.C. 28480.
Technical information on performance of metals and alloys in the marine environment.

INTERSTATE ELECTRONICS CORPORATION, Oceanics Division, 707 E. Vermont Ave., Anaheim, Calif. 92803.
Instrumentation, data processing and analysis.

J

J-TEC ASSOCIATES, INC , 315 7th Ave., S.E., Cedar Rapids, Iowa 52401.
Instrumentation, electronics, buoys, sonar, and pollution control.

K

KAHL SCIENTIFIC INSTRUMENT CORP., P.O. Box 1166, El Cajon, Calif. 92022.
Instruments.

L

LITTLE, ARTHUR D., INC., 25 Acorn Park, Cambridge, Mass. 02140.
Engineering, research and management consulting.

LIVING MARINE RESOURCES, INC., 11339 Sorrento Valley Rd., San Diego, Calif. 92121.
Consulting, fisheries management.

LOCKHEED-CALIFORNIA COMPANY, Oceanography Department, Burbank, Calif. 91503.
Surveys.

LOCKHEED MARINE LABORATORY, 3380 N. Harbor Dr., San Diego, Calif. 92101.
Underwater acoustics, automatic collection, processing and analysis of data.

LOCKHEED MISSILES AND SPACE COMPANY, P.O. Box 504, Sunnyvale, Calif. 94088.
Manned and unmanned deep submergence vehicles, offshore petroleum systems, deep ocean technology.

M

MARINE ACOUSTICAL SERVICES, Div. of TRACOR, 1975 N.W. South River Dr., Miami, Fla. 33125.
Ships and services; construction and installation of buoys, mooring systems, and deep ocean array components.

MARINE ADVISERS, INC., Div. of Bendix, P.O. Box 690, Solana Beach, Calif. 92075.
Instruments, studies and services; shoreline civil-structural engineering.

MARINE COLLOIDS, INC., Springfield, N.J. 07081.
Seaweed harvesting operations.

MARINE CONSTRUCTION AND DESIGN CO., 2300 West Commodore Way, Seattle, Wash. 98199.
Winches, research vessel design and construction.

MARINE RESOURCES, INC., 150 N. Winton Rd., Rochester, N.Y. 14610.
Submersibles, electronics, mechanical devices, surveys, and data processing.

McKIERNAN-TERRY MARINE DIVISION, Litton Systems, Inc., 580 Winters Ave., Paramus, N.J. 07652.
Research, systems analysis, integration testing and evaluation.

N

NATIONAL ENGINEERING SCIENCE COMPANY, Westgate Research Park, McLean, Va. 22101.
Oceanography, meteorology, and hydrodynamics.

NORTHROP CORP., Electro-Mechanical Div., Ocean Sciences, 1 Research Park, Palos Verdes Peninsula, Calif. 90274.
Engineering services and development of underwater vehicles.

NORTHWEST OCEANOGRAPHERS, INC., 1045 Gayley Ave., Suite 205, Los Angeles, Calif. 90024.
Management and technical consultant services.

O

OCEAN RESEARCH EQUIPMENT, INC., Falmouth Heights Rd., Box 709, Falmouth, Mass. 02541.
Buoys, acoustic systems, environmental testing, and support equipment.

OCEAN RESOURCES, INC., P.O. Box 2244, La Jolla, Calif. 92038.
Consulting, design, project management in the exploration or mining of minerals.

OCEAN SCIENCE CAPITAL CORP., 459 Hamilton Ave., Palo Alto, Calif. 94301.
Venture capital investments and entrepreneurial services.

OCEAN SCIENCE AND ENGINEERING, INC., 925 Harbor Plaza, Long Beach, Calif. 90801.
Equipment design, ship design, ship operations, mineral and oceanographic surveys.

OCEAN SYSTEMS, INC.
270 Park Ave., New York, N.Y. 10017.
Design, ocean engineering, systems operation, management, underwater construction, surveys, diving.
11440 Isaac Newton Industrial Square, North Reston, Va. 22070.
Aircraft and weapons search and recovery — underwater instruments and array implantment.

OCEANICS, INC., Technical Industrial Park, Plainview, N.Y. 11803.
Oceanography, hydrodynamics, water tunnel testing, breakwaters, platforms, propulsion systems.

OCEANIC RESEARCH INSTITUTE, 6811 La Jolla Blvd., La Jolla, Calif. 92037.
Citation services.

OCEANOGRAPHIC ENGINEERING CORP., Div. of Dillingham Corp., P.O. Box 1560, La Jolla, Calif. 92038.
Research, engineering, survey, construction, diving and drilling services; equipment rental and lease service.

OCEANOGRAPHY & POLLUTION RESEARCH, 1904 McArthur St., Manchester, Tenn. 37355.

OCEANS GENERAL, INC., 615 S.W. Second Ave., Miami, Fla. 33130.
Ocean engineering, oceanic recreational facilities, marine services, education, and training.

P

PERRY SUBMARINE BUILDERS, 100 E. 17th St., Riviera Beach, Fla. 33404.
Builders of small custom made submersibles for use in research and industry.

PRODELIN, Ocean Systems Div., Hightstown, N.J. 08520.
Stable telemetering ocean platforms, antenna systems, mooring systems.

R

RAMSAY ENGINEERING COMPANY, 707 N. Anaheim Blvd., Anaheim, Calif. 92805.
Calibration, design, and development of oceanographic instruments to measure sound velocity, temperature, and pressure.

RAYTHEON COMPANY, Submarine Signal Div., Portsmouth, R.I. 02871.
Marine research; development and production oceanographic systems, instrumentation, ASW systems.

REBIKOFF UNDERWATER PRODUCTS, 245 S.W. 32nd St., Fort Lauderdale, Fla. 33315.
Manufacturers, sale and services, undersea vehicles, cameras, television lights.

REYNOLDS SUB-MARINE SERVICES CORP., 615 S.W. Second Ave., Miami, Fla. 33130.
Ocean engineering services, including submarine operations.

S

SANDERS ASSOCIATES, INC., Ocean Systems Division, 95 Canal St., Nashua, N.H. 03060.
Consultant services, design, development, engineering services, manufacture instruments and sensors.

SEA RESEARCH AND DEVELOPMENT, INC., Bartow, Fla. 33830.
Research support, towing, salvage, manning and delivery of vessels.

SEISMOGRAPH SERVICE CORP., Box 1590, Tulsa, Okla. 74102.
Geophysical exploration.

SINGER-GENERAL PRECISION, INC., Kearfott Div., 1150 McBride Ave., Little Falls, N.J. 07424.
Electromechanical servo components, computers.

SIPPICAN CORP., Oceanographic Systems Div., Barnabas Rd., Marion, Mass. 02738.
Expendable BT system and XBT digitizer recorders.

SPARTON CORP., Sparton Electronics, 2400 E. Ganson St., Jackson, Mich. 49202.
Sonobuoys, transducers, and pressure switches.

SPERRY MARINE SYSTEMS DIVISION OF SPERRY RAND CORP., Charlottesville, Va. 22901.
Navigation aids, controls, and vessel instrumentation.

T

TETRA TECH, INC., 7730 Herschel St., La Jolla, Calif. 92037.
Optics, acoustics, geophysics, marine hydrodynamics, systems, equipment and surveys.

TEXAS INSTRUMENTS, INC., Science Services Div., Box 5621, Dallas, Tex. 75222.
Offshore geophysical exploration services, surveys, developing oceanographic instrumentation.

JOHN I. THOMPSON AND COMPANY, 1118 22nd St., N.W., Washington, D.C. 20037.
Data reduction, reasibility studies, systems engineering.

TITANIUM METALS CORPORATION OF AMERICA, 195 Clinton Rd., West Caldwell, N.J. 07006.
Fabrication of marine hardware.

TRAVELERS RESEARCH CENTER, 250 Constitution Plaza, Hartford, Conn. 06103.
Research and engineering in the environmental sciences.

U

UNITED STATES STEEL CORPORATION, 525 William Penn Place, Pittsburgh, Pa. 15230.
Cables for trawls, variable depth sonars, water sampling, fish-shocking and arrays.

V

VAN CAMP SEA FOOD COMPANY, Div. of Ralston Purina Company, 840 Van Camp St., Port of Long Beach, Calif. 90801.
Harvesting ocean's living resources.

VARIAN ASSOCIATES, 611 Hansen Way, Palo Alto, Calif. 94304.
Instruments.

VITRO LABORATORIES, 14000 Georgia Ave., Silver Spring, Md. 20910.
Research, development, design and fabrication.

W

WESTERN GEOPHYSICAL CORPORATION, Division of Litton Industries, 933 N. La Brea Ave., Los Angeles, Calif. 90038.
Seismic surveys; data processing.

WESTINGHOUSE ELECTRIC CORPORATION, Underseas Div., 3601 Washington Blvd., Baltimore, Md. 21203.
Underwater weapons systems.
Ocean Research Laboratory, 10467 Roselle St., San Diego, Calif. 92121.

Y

YELLOW SPRINGS INSTRUMENT COMPANY, INC., P.O. Box 279, Yellow Springs, Ohio 45387.
Thermistor components and instrumentation, dissolved oxygen analyzers.

LABORATORIES AND DEPARTMENTS OF OCEANOGRAPHY

Many U.S. government laboratories, state laboratories, and private oceanographic institutions have issued booklets describing their activities, and some have prepared special publications about oceanography. These may be obtained by writing directly to the laboratory explaining the specific need. Some of these publications may be found in the Publications Section in this book.

ATLANTIC ISLAND LABORATORIES*

BAHAMAS

LERNER MARINE LABORATORY, Bimini, Bahamas, B.W.I.

BERMUDA

BERMUDA BIOLOGICAL STATION FOR RESEARCH, St. George's West, Bermuda

COLUMBIA UNIVERSITY, Geophysical Field Station, St. David's, Bermuda

TRIDENT RESEARCH FACILITY, Tudor Hill, Bermuda

PUERTO RICO

UNIVERSITY OF PUERTO RICO, Department of Marine Sciences, Mayaguez, Puerto Rico 00708.

*Most of these are not located in the United States but are directly associated with this country.

IS 20

UNITED STATES

ALASKA

ALASKA DEPARTMENT OF FISH AND GAME

Headquarters:
Subport Building, Juneau, Alaska 99801

Field Laboratories:
Box 686, Kodiak, Alaska 99615
Box 669, Cordova, Alaska 99574

BUREAU OF COMMERCIAL FISHERIES

Biological Laboratory, P.O. Box 155, Auke Bay, Alaska 99821

Exploratory Fishing and Gear Research Base, P.O. Box 1668, Juneau, Alaska 99801

NAVAL ARCTIC RESEARCH LABORATORY, Barrow, Alaska 99723

INSTITUTE OF MARINE SCIENCE, University of Alaska, College, Alaska 99701

Field Laboratory:
Douglas Station, P.O. Box 349, Douglas, Alaska 99824

ALABAMA

ALABAMA FISH AND GAME COMMISSION, Dauphin Island, Ala. 36528

ALABAMA MARINE RESOURCES LABORATORY, P.O. Box 188, Dauphin Island, Ala. 36528

CALIFORNIA

ALLAN HANCOCK FOUNDATION, University of Southern California, University Park, Los Angeles, Calif. 90007

BODEGA MARINE LABORATORIES, P.O. Box 247, Bodega Bay, Calif. 94923

BUREAU OF COMMERCIAL FISHERIES

Fishery-Oceanography Center, P.O. Box 271, La Jolla, Calif. 92037

Ocean Research Laboratory, South Rotunda, Museum Building, Stanford, Calif. 94305

CALIFORNIA DEPARTMENT OF FISH AND GAME LABORATORIES

Marine Resources Laboratory, 127 G St., Eureka, Calif. 95501

Marine Resources Laboratory, Hopkins Marine Station, Pacific Grove, Calif. 93950

Marine Resources Operations Laboratory, 411 Burgess Dr., Menlo Park, Calif. 94025

State Fisheries Laboratory, 511 Tuna St., Terminal Island Station, San Pedro, Calif. 90731

COLLEGE OF ENGINEERING, Hydraulic Engineering Laboratory, 412 O'Brien Hall, University of California at Berkeley, Berkeley, Calif. 94720

DEPARTMENT OF OCEANOGRAPHY, Naval Postgraduate School, Monterey, Calif. 93940

HOPKINS MARINE STATION OF STANFORD UNIVERSITY, Pacific Grove, Calif. 93950

HUMBOLDT STATE COLLEGE, Arcata, Calif. 95521

Department of Oceanography, Humboldt State College, Arcata, Calif. 95521

Marine Laboratory, Humboldt State College, Arcata, Calif. 95521

INTER-AMERICAN TROPICAL TUNA COMMISSION

Headquarters Laboratory, c/o Scripps Institution of Oceanography, La Jolla, Calif. 92037

Terminal Island Laboratory, 700 Tuna St., Terminal Island, Calif. 90731

KERCKHOFF MARINE LABORATORY, California Institute of Technology, 101 Dahlia St., Corona Del Mar, Calif. 92625

LOCKHEED OCEAN LABORATORY, 3380 Harbor Dr., San Diego, Calif. 92101

MARINE SCIENCE INSTITUTE, University of California, Santa Barbara, Calif. 93106

MENDOCINO BIOLOGICAL FIELD STATION, Pacific Union College, Albion, Calif. 95410

MOSS LANDING MARINE LABORATORIES, California State Colleges, P.O. Box 223, Moss Landing, Calif. 95039

NAVAL CIVIL ENGINEERING LABORATORY, Port Hueneme, Calif. 93041

NAVAL UNDERSEAS RESEARCH AND DEVELOPMENT CENTER, San Diego, Calif. 92132

NAVAL UNDERSEAS RESEARCH AND DEVELOPMENT CENTER, Pasadena Laboratory, 3202 E. Foothill Blvd., Pasadena, Calif. 91107

NAVAL WEAPONS CENTER, China Lake, Calif. 93557

PACIFIC MARINE STATION, University of the Pacific, Dillon Beach, Calif. 94929

SANTA BARBARA MARINE LABORATORY, Department of Biological Sciences, University of California at Santa Barbara, Santa Barbara, Calif. 93106

SANTA CATALINA MARINE BIOLOGICAL LABORATORY, Big Fisherman Cove, Santa Catalina Island, P.O. Box 398, Avalon, Calif. 90704

SCRIPPS INSTITUTION OF OCEANOGRAPHY, University of California, San Diego, P.O. Box 109, La Jolla, Calif. 92037

The Nimitz Marine Facility, Foot of Rosecrans, San Diego, Calif. 92106

Marine Physical Laboratory, San Diego, Calif. 92152

Visibility Laboratory, San Diego, Calif. 92152

Associated Research Institutes:

Institute of Geophysics and Planetary Physics, La Jolla Laboratory, University of California, San Diego, P.O. Box 109, La Jolla, Calif. 92037

Institute of Marine Resources, University of California, Scripps Institution of Oceanography, P.O. Box 109, La Jolla, Calif. 92037

SEA OPERATIONS DEPARTMENT, AC Electronics, Defense Research Laboratories, General Motors Corp., 6767 Hallister Ave., Goleta, Calif. 93017

STANFORD RESEARCH INSTITUTE, Biological Sonar Laboratory, Stanford Research Institute, Menlo Park, Calif. 94025

TIBURON OCEANOGRAPHIC CENTER, U.S. Department of the Interior, 3150 Paradise Dr., Tiburon, Calif. 94920

Marine Mineral Technology Center, Bureau of Mines, 3150 Paradise Dr., Tiburon, Calif. 94920

Tiburon Marine Laboratory, Bureau of Sport Fisheries and Wildlife, P.O. Box 98, Tiburon, Calif. 94920

U.S. GEOLOGICAL SURVEY

La Jolla Marine Geology Laboratory, 8604 La Jolla Shores Dr., La Jolla, Calif. 92037

Headquarters Office of Marine Geology, 345 Middlefield Road, Menlo Park, Calif. 94025

WESTINGHOUSE OCEAN RESEARCH LABORATORY, 10467 Roselle St., San Diego, Calif. 92121

CONNECTICUT

BINGHAM OCEANOGRAPHIC LABORATORY, Yale University, Box 2025, Yale Station, New Haven, Conn. 06520

BUREAU OF COMMERCIAL FISHERIES, Biological Laboratory, Milford, Conn. 06460

MARINE RESEARCH LABORATORY, University of Connecticut, Noank, Conn. 06340

NAVAL UNDERWATER SOUND LABORATORY, New London, Conn. 06321

DELAWARE

BAYSIDE LABORATORY, P.O. Box 514, Lewes, Del. 19958

CAPE HENLOPEN LABORATORY, P.O. Box 232, Lewes, Del. 19958

MARINE LABORATORIES, University of Delaware, Department of Biological Sciences, Newark, Del. 19711

DISTRICT OF COLUMBIA

BUREAU OF COMMERCIAL FISHERIES, National Center for Systematics Studies, U.S. National Museum, Room 57-A, Washington, D.C. 20560

COASTAL ENGINEERING RESEARCH CENTER, Corps of Engineers, 5201 Little Falls Rd., N.W., Washington, D.C. 20016

MAURY CENTER FOR OCEAN SCIENCE, 4555 Overlook Ave., S.W., Washington, D.C. 20390

MUSEUM OF NATURAL HISTORY, Smithsonian Institution, Washington, D.C. 20560

NATIONAL OCEANOGRAPHIC DATA CENTER, 3rd Floor, Building 160, 2nd and M sts., S.E., Washington, D.C. 20390

NAVAL OCEANOGRAPHIC OFFICE, Department of the Navy, Washington, D.C. 20390

NAVAL SHIP RESEARCH AND DEVELOPMENT CENTER, Department of the Navy, Carderock, Md., Mailing address: Washington, D.C. 20007

U.S. COAST GUARD, Oceanographic Unit, Building 149-E, Navy Yard Annex, Washington, D.C. 20390

U.S. GEOLOGICAL SURVEY, Marine Geology, Washington, D.C. 20242

FLORIDA

ATLANTIC OCEANOGRAPHIC AND METEOROLOGICAL LABORATORY, ESSA, 901 South Miami Ave., Miami, Fla. 33130

BUREAU OF COMMERCIAL FISHERIES

Biological Laboratory, 75 - 33rd Ave., St. Petersburg Beach, Fla. 33706

Biological Station, Sabine Island, Gulf Breeze, Fla. 32561

Tropical Atlantic Biological Laboratory, 75 Virginia Beach Drive, Miami, Fla. 33149

CAPE HAZE MARINE LABORATORY, 9501 Blind Pass Rd., Sarasota, Fla. 33581

COASTAL AND OCEANOGRAPHIC ENGINEERING DEPARTMENT, College of Engineering, University of Florida, Gainesville, Fla. 32603

FLORIDA DEPARTMENT OF NATURAL RESOURCES

Marine Resources Division
Marine Research Laboratories

Drawer F, St. Petersburg 33731
P.O. Box 941, Jensen Beach 33457
P.O. Box 1995, Sanford 32771
P.O. Box 276, Crystal River 32629
P.O. Box 366, Apalachicola 32320
P.O. Box 493, Fernandina 32034
P.O. Box 1207, Key West 33040

FLORIDA STATE UNIVERSITY, Department of Oceanography, Tallahassee, Fla, 32306

ROSENSTIEL SCHOOL OF MARINE AND ATMOSPHERIC SCIENCES, University of Miami, 10 Rickenbacker Causeway, Miami, Fla. 33149

PHYSICAL OCEANOGRAPHIC LABORATORY, Nova University, 1901 S.E. Fifteenth St., Fort Lauderdale, Fla. 33316

UNIVERSITY OF FLORIDA, Marine Laboratory, Cedar Key, Fla. 32625

U.S. NAVAL SHIP RESEARCH AND DEVELOPMENT LABORATORY, Panama City, Fla. 32401

GEORGIA

BUREAU OF COMMERCIAL FISHERIES

Exploratory Fishing and Gear Research Station, Box 607, 622 Beachview Dr., St. Simons Island, Ga. 31522

GEORGIA GAME & FISH COMMISSION LABORATORY, Game and Fish Commission Building, Brunswick, Ga. 31520

SKIDAWAY INSTITUTE OF OCEANOGRAPHY, Skidaway Island, Ga. 31406

UNIVERSITY OF GEORGIA MARINE INSTITUTE, Sapelo Island, Ga. 31327

HAWAII

BUREAU OF COMMERCIAL FISHERIES, Biological Laboratory, P.O. Box 3830, Honolulu, Hawaii 96812

DIVISION OF FISH AND GAME, Department of Land and Natural Resources, 530 S. Hotel St., Honolulu, Hawaii 96813

HAWAII INSTITUTE OF MARINE BIOLOGY, University of Hawaii, P.O. Box 1067, Kanehoe, Hawaii 96744

HAWAII LABORATORY, Naval Underseas Research and Development Center, P.O. Box 997, Kailua, Hawaii 96734

JOINT TSUNAMI RESEARCH EFFORT, ESSA Pacific Oceanographic Laboratories, Hawaii Institute of Geophysics, 2525 Correa Road, Honolulu, Hawaii 96822

OCEANIC INSTITUTE, Makapuu Point, Oahu, Hawaii 96795

UNIVERSITY OF HAWAII

Hawaii Institute of Geophysics, Honolulu, Hawaii 96822

Department of Oceanography, Honolulu, Hawaii 96822

LOUISIANA

BUREAU OF COMMERCIAL FISHERIES, Statistical Center and Market News Office, Room 608, Federal Building, 600 South St., New Orleans, La. 70130

COASTAL STUDIES INSTITUTE, Louisiana State University, Baton Rouge, La. 70803

LOUISIANA WILDLIFE AND FISHERIES COMMISSION

Grand Terre Island Laboratory, 400 Royal St., New Orleans, La. 70130

Rockefeller Wildlife Refuge Laboratory, Grand Chenier, La. 70643

OFFICE OF SEA GRANT DEVELOPMENT/DEPARTMENT OF MARINE SCIENCES, Louisiana State University, Baton Rouge, La. 70803

UNIVERSITY OF SOUTHWESTERN LOUISIANA, Lafayette, La. 70801

MAINE

BUREAU OF COMMERCIAL FISHERIES, Biological Laboratory, P.O. Box 128, West Boothbay Harbor, Maine 04575

IRA C. DARLING CENTER FOR RESEARCH, TEACHING AND SERVICE, University of Maine, Walpole, Maine 04573

MAINE DEPARTMENT OF SEA AND SHORE FISHERIES, Fisheries Research Station, Boothbay Harbor, Maine 04538

MARYLAND

BUREAU OF COMMERCIAL FISHERIES, Biological Laboratory, Oxford, Md. 21654

CHESAPEAKE BAY INSTITUTE, The Johns Hopkins University, Oceanography Building, Baltimore, Md. 21218

CHESAPEAKE BIOLOGICAL LABORATORY, Natural Resources Institute, University of Maryland, P.O. Box 38, Solomons, Md. 20688

INSTITUTE FOR OCEANOGRAPHY, ESSA Institutes for Environmental Research, Department of Commerce, Gramax Building, 8060 - 13th St., Silver Spring, Md. 20910

THE JOHNS HOPKINS UNIVERSITY, Department of Oceanography, Baltimore, Md. 21218

NAVAL ORDNANCE LABORATORY, White Oak, Silver Spring, Md. 20910

NAVAL SHIP RESEARCH AND DEVELOPMENT CENTER, Department of the Navy, Carderock, Md., Washington, D.C. 20007

MASSACHUSETTS

BUREAU OF COMMERCIAL FISHERIES

Biological Laboratory, P.O. Box 6, Woods Hole, Mass. 02543

Exploratory Fishing & Gear Research Base, State Fish Pier, Gloucester, Mass. 01930

DEPARTMENT OF EARTH AND PLANETARY SCIENCES, 54-912, Earth Science Laboratory, Massachusetts Institute of Technology, 77 Massachusetts Ave., Cambridge, Mass. 02139

MARINE BIOLOGICAL LABORATORY, Woods Hole, Mass. 02543

MUSEUM OF COMPARATIVE ZOOLOGY, Harvard College, Cambridge, Mass. 02138

U.S. GEOLOGICAL SURVEY, Marine Geology, Woods Hole, Mass. 02543

WOODS HOLE OCEANOGRAPHIC INSTITUTION, Woods Hole, Mass. 02543

MICHIGAN

UNIVERSITY OF MICHIGAN, Great Lakes Research Division, 1077 N. University Blvd., Ann Arbor, Mich. 48104

MINNESOTA

LIMNOLOGICAL RESEARCH STATION, University of Minnesota, Duluth, Minn. 55812

MISSISSIPPI

BUREAU OF COMMERCIAL FISHERIES, Exploratory Fishing and Gear Research Base, P.O. Box 1207, Pascagoula, Miss. 39567

GULF COAST RESEARCH LABORATORY, Ocean Springs, Miss. 39564

U.S. ARMY ENGINEERS WATERWAYS EXPERIMENT STATION, Vicksburg, Mississippi 49097

NEW JERSEY

DEPARTMENT OF ZOOLOGY, Rutgers—The State University, New Brunswick, N.J. 08903

NEW JERSEY OYSTER RESEARCH LABORATORIES

Department of Zoology, Rutgers—The State University, New Brunswick, N.J. 08903

Oyster Research Laboratory, Bivalve, N.J. 08301

Oyster Research Laboratory, R.F.D. #2, Cape May Courthouse, N.J. 08210

Rutgers Shellfish Laboratory, 128 Ocean Ave., Monmouth Beach, N.J. 07750

SANDY HOOK MARINE LABORATORY, Bureau of Sport Fisheries and Wildlife, Fort Hancock, Highlands, N.J. 07732

NEW YORK

DEPARTMENT OF MARINE SCIENCE, Long Island University (C.W. . Companies), Greenvale, L.I., N.Y. 11548

DEPARTMENT OF METEOROLOGY AND OCEANOGRAPHY, School of Engineering and Science, New York University, University Heights, Bronx, N.Y. 10453

GENETICS LABORATORY, The American Museum of Natural History, New York, N.Y. 10024

INSTITUTE OF MARINE SCIENCE, Adelphi University, Garden City, L.I., N.Y. 11530

INSTITUTE OF OCEANOGRAPHY AND MARINE BIOLOGY, P.O. Box 432, Oyster Bay, L.I., N.Y. 11771

LAMONT-DOHERTY GEOLOGICAL OBSERVATORY, Columbia University, Palisades, N.Y. 10964

NEW YORK OCEAN SCIENCE LABORATORY, P.O. Box 867, Montauk, L.I., N.Y. 11954

OCEAN ENGINEERING DIVISION, Henry Krumb School of Mines, 828 Mudd, Columbia University, New York, N.Y. 10027

OCEANOGRAPHIC AND METEOROLOGICAL LABORATORY, New York State Maritime Academy, Fort Schuyler, Bronx, N.Y. 10465

U.S. COAST GUARD, International Ice Patrol, Governors Island, New York, N.Y. 10004

NORTH CAROLINA

BUREAU OF COMMERCIAL FISHERIES

Center for Estuarine & Menhaden Research, Pivers Island, Beaufort, N.C. 28516

DUKE UNIVERSITY MARINE LABORATORY, Beaufort, N.C. 28516

EAST CAROLINA UNIVERSITY MARINE SCIENCE CENTER, 204 Erwin Hall, Greenville, N.C. 27834

INSTITUTE OF MARINE SCIENCES, University of North Carolina, Morehead City, N.C. 28557

THE INTERNATIONAL NICKEL COMPANY, INC., Francis L. LaQue Corrosion Laboratory, P.O. Box 656, Wrightsville Beach, N.C. 28480

OREGON

DEPARTMENT OF OCEANOGRAPHY, Oregon State University, Corvallis, Ore. 97331

MARINE SCIENCE CENTER, Oregon State University, Marine Science Drive, Newport, Ore. 97365

OREGON FISH COMMISSION RESEARCH LABORATORIES

Headquarters:

Rt. 2, Box 31-A, Clackamas, Ore. 97015

Field Laboratories:

859 Olney Ave., Astoria, Ore. 97103

207 Marine Science Center, Marine Science Drive, Newport, Ore. 97365

OREGON INSTITUTE OF MARINE BIOLOGY, University of Oregon, Charleston, Ore. 97420

PENNSYLVANIA

CENTER FOR MARINE AND ENVIRONMENTAL STUDIES, Lehigh University, Bethlehem, Pa. 18015

East Point Marine Station, East Point, N.J.

Laboratory of Geotechnical Ocean Engineering, Lehigh University, Bethlehem, Pa. 18015

INSTITUTE FOR THE DEVELOPMENT OF RIVERINE AND ESTUARINE SYSTEMS, The Franklin Institute Research Laboratories, 20th St. and Benjamin Franklin Parkway, Philadelphia, Pa. 19103

PHILADELPHIA ACADEMY OF NATURAL SCIENCES, Department of Limnology, Philadelphia, Pa. 19103

RHODE ISLAND

NARRAGANSETT MARINE GAME FISH LABORATORY, R.F.D. 2, Box 522-A, Narragansett, R.I. 02882

UNIVERSITY OF RHODE ISLAND, Graduate School of Oceanography, Narragansett Bay Campus, Narragansett, R.I. 02882

U.S. NAVAL UNDERWATER ORDNANCE STATION, Newport, R.I. 02844

SOUTH CAROLINA

BEARS BLUFF LABORATORIES, Wadmalaw Island, S.C. 29487

COLLEGE OF CHARLESTON, GEORGE D. GRICE MARINE LABORATORY, Ft. Johnson, Rt. 1, Charleston, S.C. 29407

TEXAS

A & M MARINE LABORATORY, Texas A&M University, Building 311, Ft. Crockett, Galveston, Tex. 77552

BUREAU OF COMMERCIAL FISHERIES

Biological Laboratory, Building 302, Ft. Crockett, Galveston, Tex. 77552

DEPARTMENT OF OCEANOGRAPHY, Texas A&M University, College Station, Texas 77843

MARINE LABORATORY, Texas Parks & Wildlife Department, P.O. Box 1117, Rockport, Tex. 78382

MARINE SCIENCE INSTITUTE, The University of Texas, Port Aransas, Tex. 78373

U.S. GEOLOGICAL SURVEY, Marine Geology, P.O. Box 1916, Corpus Christi, Tex. 78403

VIRGINIA

OLD DOMINION UNIVERSITY, Institute of Oceanography, 1509 Pleasant Ave., Norfolk, Va. 23508

VIRGINIA INSTITUTE OF MARINE SCIENCE, Gloucester Point, Va. 23062

Eastern Shore Laboratory, Wachapreague, Va. 23480

WASHINGTON

BIOLOGICAL STATION, Walla Walla College, Rt. 3, Box 555, Anacrotes, Wash. 98221

BUREAU OF COMMERCIAL FISHERIES

Biological Laboratory, 2725 Montlake Blvd. East, Seattle, Wash. 98102

Exploratory Fishing and Gear Research Base, 2725 Montlake Blvd. East, Seattle, Wash. 98102

Marine Mammal Research Laboratory, Bldg. 192, Sand Point Naval Air Station, Seattle, Wash. 98115

OCEANIC INSTITUTE, Lummi Island Laboratory, Lummi Island, Bellingham, Wash. 98262

PACIFIC OCEANOGRAPHIC LABORATORIES, ESSA Research Laboratories, University of Washington, Seattle, Wash. 98105

UNIVERSITY OF WASHINGTON, Seattle, Wash. 98105

Applied Physics Laboratory, 1013 N.E. 40th St.

Department of Oceanography

Division of Marine Resources, 3716 Brooklyn Ave., N.E.

Fisheries Research Institute, College of Fisheries

Friday Harbor Laboratories, Johnson Hall

International Pacific Halibut Commission, Oceanography Teaching Building

Laboratory of Radiation Ecology, Fisheries Center

WASHINGTON DEPARTMENT OF FISHERIES RESEARCH LABORATORIES

Headquarters:

Room 115, General Administration Building, Olympia, Wash. 98501

Branches:

Coastal Research Laboratory, 401 W. Wishkah, Aberdeen, Wash. 98520

Columbia River Laboratory, 1408 Franklin St., Vancouver, Wash. 98660

State Shellfish Laboratory, P.O. Box 120, Brinnon, Wash. 98320

University Laboratory, College of Fisheries - M2, University of Washington, Seattle, Wash. 98105

Willapa Bay Oyster Laboratory, Box 158, Ocean Park, Wash. 98640

WISCONSIN

CENTER FOR GREAT LAKES STUDIES, University of Wisconsin-Milwaukee, Milwaukee, Wis. 53201

ORGANIZATIONS

Though there is some minor overlap between this list of organizations and the preceding list of laboratories, the government and private organizations listed in this section are primarily engaged in planning and administration rather than in "doing" oceanography. Educational materials about oceanography are available from many of these organizations, as described in the following section, and most of the organizations publish technical material, journals, or special reports. Some of these are listed in the Section on Scientific and Technical Journals.

Initials in parentheses following each address identify the organizations whose full names and addresses are spelled out elsewhere in this book. Though they are common shorthand designations, these initials are not part of the formal addresses at the organizations.

GOVERNMENT AGENCIES

BUREAU OF COMMERCIAL FISHERIES (BCF), Fish and Wildlife Service, Department of the Interior, Washington, D.C. 20240

COAST AND GEODETIC SURVEY (C&GS), Environmental Science Services Administration, Washington Science Center, Rockville, Md. 20852

COAST GUARD HEADQUARTERS (USCG), Commandant (API), 1300 E St., N.W., Washington, D.C. 20591

GOVERNMENT PRINTING OFFICE (GPO), Superintendent of Documents, Washington, D.C. 20402

MARINE SCIENCES AFFAIRS STAFF (MSAS), Office of the Oceanographer of the Navy, Navy Annex, Building 159-E, Room 476, Washington, D.C. 20390

NATIONAL COUNCIL ON MARINE RESEARCH & ENGINEERING DEVELOPMENT (NCMRED), Federal Building 7, 17th & H Sts., N.W., Washington, D.C. 20500

NAVAL OCEANOGRAPHIC OFFICE (NOO), Department of the Navy, Washington, D.C. 20390

NATIONAL OCEANOGRAPHIC DATA CENTER (NODC), Building 160, 3rd Floor, Navy Yard Annex, Washington, D.C. 20390

OCEAN CENTER, Office of the Oceanographer of the Navy, 732 N. Washington St., Alexandria, Va. 22314

OFFICE OF MARINE RESOURCES, U.S. Department of the Interior, Washington, D.C. 20240

PRIVATE ORGANIZATIONS

AMERICAN FISHERIES SOCIETY (AFS), Suite 1040, Washington Bldg., 15th & New York Ave., N.W., Washington, D.C. 20005

AMERICAN GEOLOGICAL INSTITUTE (AGI), 2201 M St., N.W., Washington, D.C. 20037

AMERICAN GEOPHYSICAL UNION (AGU), Suite 435, 2100 Pennsylvania Ave., N.W., Washington, D.C. 20037

AMERICAN INSTITUTE OF BIOLOGICAL SCIENCES (AIBS), 3900 Wisconsin Ave., N.W., Washington, D.C. 20016

AMERICAN SOCIETY OF LIMNOLOGY AND OCEANOGRAPHY, INC. (ASLO), W.K. Kellogg Biological Station, Michigan State University, Hickory Corners, Mich. 49060

THE AMERICAN SOCIETY FOR OCEANOGRAPHY (ASO), 854 Main Building, Houston, Texas 77002

INTERNATIONAL OCEANOGRAPHIC FOUNDATION (IOF), 10 Rickenbacker Causeway, Miami, Fla. 33149

MARINE TECHNOLOGY SOCIETY (MTS), 1730 M St., N.W., Washington, D.C. 20036

NATIONAL ACADEMY OF SCIENCES – NATIONAL RESEARCH COUNCIL, Committee on Oceanography (NASCO), 2101 Constitution Ave., N.W., Washington, D.C. 20418

NATIONAL OCEANOGRAPHY ASSOCIATION (NOA), 1900 L St., N.W., Washington, D.C. 20036

SECTION II

PUBLICATIONS

EDUCATIONAL MATERIAL

A wide variety of oceanography career materials that can be obtained from government agencies, private organizations, and oceanographic laboratories are described briefly in this section.

When writing to any of the organizations, the most satisfactory response can be expected if it is clear that the writer has a special interest in the material requested and has not sent a "shotgun" request to a "shopping list" of agencies asking for "all the information you have about oceanography." Be specific and show that you have done some homework about the topic of interest before you resort to stamp and pen. A return-addressed, stamped, business-letter-size envelope will usually be appreciated.

Full addresses of the organizations identified by initials are in the previous section.

BIBLIOGRAPHIES, COMPILATIONS, REFERENCE LISTS

MARINE AND FRESH WATER SCIENCE PAPERBACK BOOKS. A list compiled by Professor Bernard L. Gordon, Department of Earth Sciences, Northeastern University, Boston, Mass. 02115. 5 pp., postage and handling, 25¢.

OCEANOGRAPHY IN PRINT. A selected list of educational resources. Oceanographic Education Center, Town of Falmouth Public Schools, Falmouth, Mass. 02541. 58 pp., 75¢.

A READERS GUIDE TO OCEANOGRAPHY. Revised 1968, 10¢ a copy in bulk, Woods Hole Oceanographic Institution (Mass.).

SELECTED READING IN OCEANOGRAPHY. 8 pp., 50¢. See NOA, Private organizations.

SUGGESTED PUBLICATIONS IN THE MARINE SCIENCES. 4 pp., mimeo., includes references on ichthyology, marine fishes, the oceans, fishing and fisheries. Free. Sandy Hook Marine Laboratory (N.J.).

SELECTED OCEANOGRAPHIC PUBLICATIONS. U.S. Government Printing Office, free; lists more than 30 publications available from the GPO including GLOSSARY OF OCEANOGRAPHIC TERMS ($2.25), QUESTIONS ABOUT THE OCEANS (55¢), and OCEANOGRAPHIC CURRICULUM FOR HIGH SCHOOLS (35¢).

CAREER INFORMATION

BECOMING AN OCEANOGRAPHER. 2 pp., reprint, free. See NOA, Private organizations.

CAREER INFORMATION IN OCEANOGRAPHY. 2 pp., free. NOA.

CAREERS IN BIOLOGY. 18 pp., with bibliography, single copies free. See AIBS, Private organizations.

GEOLOGY, SCIENCE AND PROFESSION. Brochure for high school students, 22 pp., revised 1967. See AGI, Private organizations.

GEOPHYSICS ON THE MOVE. June 1962, 7 pp.; GEOPHYSICS TODAY, June 1962, 8 pp.; INFORMATION CONCERNING THE BROAD FIELD OF GEOPHYSICS, a brief explanation of educational background needed and the names of some schools where training may be pursued, 10 pp., mimeo. See AGU, Private organizations.

MARINE GEOLOGY. Research beneath the sea, 14 pp. See USGS, Government agencies.

OPPORTUNITIES IN OCEANOGRAPHY. Smithsonian Institution, Washington, D.C. 20560, $1.00; 10 or more, 75¢ each.

PREPARING FOR A CAREER IN OCEANOGRAPHY. List of universities and suggested sources of information on oceanography. See SIO (Calif.), Laboratories and departments of oceanography.

SECRETS OF THE SEA—OCEANOGRAPHY FOR YOUNG SCIENTISTS. American Education Publications, Education Center, Columbus, Ohio 43216. Minimum of 10 copies, 25¢ each.

SO YOU WANT TO BE A MARINE SCIENTIST? Miami Seaquarium, Rickenbacker Causeway, Miami, Fla. 33149, free.

TRAINING AND CAREERS IN MARINE SCIENCE. 15 pp., free. See IOF, Private organizations.

YOUR FUTURE IN OCEANOGRAPHY, by Norman H. Gaber, 1967. Richard Rosen Press, Inc., 29 East 21st St., New York, N.Y. 10010. $4.00.

CURRICULA INFORMATION

OCEANOGRAPHY CURRICULA. 4-page summary, revised 1969, free. See NOA, Private organizations.

SCHOLARSHIPS, GRANTS-IN-AID AND FELLOWSHIPS FOR OCEANOGRAPHY STUDENTS. Copies up to 100, 50¢ each, over 100, 25¢ each, NOA.

UNIVERSITY CURRICULA IN THE MARINE SCIENCES AND RELATED FIELDS. Academic years 1969–70 and 1970–71, 273 pp., $2.00. See GPO, Government agencies.

FILMS AND FILMSTRIPS

Cartridged film loops on ocean topics, Ealing Film Loops, 2225 Massachusetts Ave., Cambridge, Mass. 02142

FILMS ON OCEANOGRAPHY. $1.00, GPO.

TIDES AND CURRENTS, SURVEYORS AT WORK, THE *EXPLORER* OCEANOGRAPHIC EXPEDITION, GEORGES BANK STUDIES, and TSUNAMI (about seismic sea waves) — 3-day loans to schools, C&GS.

16 mm black and white sound films on oceanography, 35 mm slides with narration, on loan for postage from the USCG, or your local Coast Guard District Office.

Audiovisuals on oceanography and hydrography available on loan, including briefings accompanied by 35 mm slides, filmstrips and 16 mm films with soundtrack, NOO.

AND NOW THE SEA, 16 mm sound film on loan, Rosenstiel School of Marine and Atmospheric Sciences. See Laboratories of Oceanography, Fla.

OCEANOGRAPHY—EXPLORING MAN'S DEEP FRONTIER, 8 filmstrips with booklets and recorded narration. Prepared under the auspices of the NAS Committee on Oceanography. Available from Encyclopaedia Britannica, Educational Corporation, 425 North Michigan Ave., Chicago, Ill. 60611. Write for price list.

A film library is maintained at the International Oceanographic Foundation. See Private organizations. Write for list.

KITS

SCIENCE AND THE SEA. Two ocean science study kits designed for the teacher ($3.20) and the student ($1.60). Check or money order should be made payable to the U.S. Naval Oceanographic Office. Mail orders from purchasers west of the Mississippi River should be sent to:

Naval Oceanographic Distribution Office
Clearfield, Utah 84016

Mail orders from all other locations should be sent to:

Naval Oceanographic Distribution Office
5801 Tabor Avenue
Philadelphia, Pennsylvania 19120

LABORATORY PROGRAMS

Many oceanographic laboratories supply pamphlets, brochures, etc., describing their programs. Many also have excellent advice on how to prepare for a career in oceanography. Included prominently in this group are the Rosenstiel School of Marine and Atmospheric Sciences (Fla.); the Virginia Institute of Marine Sciences; the Texas Agriculture and Mechanical College, Department of Oceanography; the Department of Oceanography at the University of Washington; the Department of Oceanography at The John Hopkins University (Md.); the Scripps Institution of Oceanography (Calif.); and the Graduate School of Oceanography at the University of Rhode Island.

GENERAL INQUIRIES

Because of their broad responsibilities and interests, some of the government agencies and private organizations listed in the previous section respond to general inquiries. Of special note are the National Council on Marine Resources and Engineering Development, National Oceanographic Data Center, the Ocean Center, American Society for Oceanography, International Oceanographic Foundation, Marine Technology Society, National Oceanography Association, and the Marine Sciences Affairs Staff.

REFERENCE LISTS, DIRECTORIES, COMPILATIONS OF INFORMATION

DIRECTORY OF MARINE SCIENCES PROGRAMS AND FACILITIES ON THE PACIFIC COAST, Biological Sciences Department, California State Polytechnic College, San Luis Obispo, Calif. 93401, 1969 edition, 54 pp.

A GLOSSARY OF OCEAN SCIENCE AND UNDERSEA TECHNOLOGY TERMS, Compass Publications, Arlington, Va. 22209, 1965 edition. $5.95.

GLOSSARY OF OCEANOGRAPHIC TERMS, 2nd edition, 1966, U.S. Government Printing Office, Washington, D.C. 20402. $2.25.

HYDROSPACE BUYER'S GUIDE, Data Publications, West Building, Washington National Airport, Washington, D.C. 20001, 1969 edition. $15.

METEOROLOGICAL AND GEOASTROPHYSICAL ABSTRACTS. Abstracts of the literature of oceanography, the American Meteorological Society, 45 Beacon Street, Boston, Mass. 02108. $200 to educational institutions and public libraries, $400 to others, 12/yr.

OCEAN MASTER, Charles Kerr Enterprises, Inc., 129 N. Main St., New Hope, Pa. 18938, 540 pp., catalog of oceanographic equipment. Indexed illustrations and specifications of product lines of about 60 manufacturers. $15 per copy, plus $1 east of Rocky Mountains; $1.25 west of Rockies; and $2.50 outside of USA.

OCEANIC CITATION JOURNAL AND OCEANIC INDEX, Oceanic Library and Information Center, P.O. Box 2369, La Jolla, Calif. 92037. Nine journals per year, index issued at intervals. Prices vary in the range of hundreds of dollars with type of subscriber and services rendered.

OCEANOLOGY INTERNATIONAL 1969 YEARBOOK AND DIRECTORY, Industrial Research Publications Company, Beverly Shores, Ind. 47301. $5.

UNDERSEA TECHNOLOGY HANDBOOK DIRECTORY, 1968, Compass Publications, Inc., 1117 N. 19th St., Arlington, Va. 22209. $20.

WORLD SPACE DIRECTORY INCLUDING OCEANOGRAPHY, Ziff-Davis Aviation Division, 1156 15th St., N.W., Washington, D.C. 20005. $20.

WORLDWIDE OFFSHORE DRILLING AND CONSTRUCTION CONTRACTOR'S DIRECTORY, 1969. P.O. Box 1260, Tulsa, Okla. 94101. $15.

A DIRECTORY OF OCEANOGRAPHERS IN THE UNITED STATES, 1969. More than 1,350 entries, list of addresses and specialization, NAS Printing and Publishing Office, 72 pp. $2.50.

JOURNALS, BULLETINS, NEWSLETTERS, AND PERIODICALS

Many laboratories publish their own series of technical publications and special reports. Most are highly technical and specialized and therefore, are not listed here.

THE AGI REPORT, American Geological Institute, 2201 M St., N.W., Washington, D.C. 20037, $25, 52/year.

AMERICAN OCEANOGRAPHY, the American Society for Oceanography, 854 Main Building, Houston, Texas 77002, 12/year, free to members.

BUREAU OF COMMERCIAL FISHERIES REPORT, circulars, Fishery Bulletin, scientific reports on fisheries, Commercial Fisheries Review, and other publications. Chief, Division of Publications, 1801 N. Moore St., Arlington, Va. 22209.

DAVY JONES NEWSLETTER, EG&G International, Geodyne Div., 151 Bear Hill Road, Waltham, Mass. 02154, free, 4/year.

DEEP SEA RESEARCH, and Oceanographic Abstracts, Pergamon Press, Maxwell House, Fairview Park, Elmsford, N.Y. 10523. $60 for libraries and other multiple-reader institutions. Reduced rate for individuals' personal use, $10, 6/year.

EOS (Transactions, American Geophysical Union), American Geophysical Union, Suite 435, 2100 Pennsylvania Ave., N.W., Washington, D.C. 20037, $5, 12/year.

FLASHES, National Fisheries Institute, Suite 315, 1225 Connecticut Ave., N.W., Washington, D.C. 20036

FLOY NEWS, Floy Tag and Manufacturing, Inc., 2909 N.E. Blakely St., Seattle, Wash. 98105, free, irregular.

GEOPHYSICAL FLUID DYNAMICS, edited by A.R. Robinson, Harvard University, quarterly.

GEOTIMES, American Geological Institute, 2201 M St., N.W., Washington, D.C. 20037, $2, 10/year.

GULF REVIEW, Gulf Universities Research Corporation, 1611 Tremont St., Galveston, Texas 77550.

HYDROGRAM, 1808 Wisconsin Ave., N.W., Washington, D.C. 20007, $9, 24/year.

JOURNAL OF GEOPHYSICAL RESEARCH, American Geophysical Union, Suite 435, 2100 Pennsylvania Ave., N.W., Washington, D.C. 20037, (1970), $50, 36/year (12 devoted to oceans and atmospheres).

JOURNAL OF MARINE RESEARCH, Box 2025 Yale Station, New Haven, Conn. 06520, 3/year. $15 per year to institutions, libraries, and agents. $10 per year for individual subscribers.

JOURNAL OF PHYSICAL OCEANOGRAPHY, the American Meteorological Society, 45 Beacon Street, Boston, Massachusetts 02108, $20, 4/yr.

LIMNOLOGY & OCEANOGRAPHY, Allen Press, Lawrence, Kans. 66044, 6/year, $15.

MARINE POLLUTION BULLETIN, Macmillan (Journals) Ltd., Subscription Dept., Brunel Rd., Basingstoke, Hants, England. 12/yr., £2. 10s.

MARINE RESOURCE BULLETIN, Alabama Marine Research Laboratory, Dauphin Island, Ala. 36528, unpriced, irregular.

MARINE RESOURCES/MARINE BIOLOGY DIGEST, Girard Associates, P.O. Box 404, Mt. Arlington, N.J. 07856, $30, 12/year.

MARINE TECHNOLOGY SOCIETY JOURNAL, Marine Technology Society, 1730 M St., N.W., Washington, D.C. 20036, $10, 6/year.

MARTEK MARINE, Martek Instruments, Inc., 879 West 16th St., Newport Beach, Calif. 92660.

MARITIMES, University of Rhode Island, Graduate School of Oceanography, Kingston, R.I. 02881, free, limited distribution, 4/year.

MTS MEMO, Marine Technology Society, 1730 M St., N.W., Washington, D.C. 20036, free to members.

NASCO NOTES, Committee on Oceanography, National Academy of Sciences, 2101 Constitution Ave., N.W., Washington, D.C. 20418, free, limited distribution, irregular.

NAVAL OCEANOGRAPHIC NEWSLETTER, U.S. Naval Oceanographic Office, Washington, D.C. 20360, free, limited distribution, irregular.

NAVAL RESEARCH REVIEWS, Code 740, Office of Naval Research, Washington, D.C. 20390, $1.50, 12/year.

NEWSLETTER, National Oceanographic Data Center, Washington, D.C. 20390, free, 10/year.

NOA NEWS, National Oceanography Association, 1900 L St., N.W., Washington, D.C. 20036, free to NOA members, subscription, $5, 11/year.

OCEAN INDUSTRY, P.O. Box 2608, Houston, Texas 77001, $12, 12/year.

OCEAN MINING REPORT, Ocean Resources, Inc., P.O. Box 2244, La Jolla, Calif. 92037, distributed to corporations interested in ocean mining, 12/year.

OCEAN SCIENCE NEWS, Nautilus Press, Inc., National Press Building, Washington, D.C. 20004, $165, 52/year.

OCEANIC INSTRUMENTATION REPORTER, Ocean Engineering Information Service, Box 989, La Jolla, Calif. 92037, $15, 12/year.

OCEANOLOGY, The Weekly of Ocean Technology, 1156 15th St., N.W., Washington, D.C. 20005, $95, 52/year.

OCEANOLOGY INTERNATIONAL, Industrial Research, Inc., Beverly Shores, Ind. 46301, $10, 12/year.

OCEANOGRAPHIC INSTRUMENTS IN ACTION, Ramsay Engineering Co., 707 N. Anaheim Blvd., Anaheim, Calif. 92805, free, irregular.

OCEANS MAGAZINE, P.O. Box 121, Des Moines, Iowa 50301, $12, 12/year.

OCEANUS, Woods Hole Oceanographic Institution, Woods Hole, Mass. 02543, free, limited distribution to libraries, 4/year.

PACIFIC NORTHWEST SEA, Oceanographic Commission of Washington, 200 2nd Ave. North, Seattle, Wash. 98109, 4/year.

POLYCHAETA, A NEWSLETTER OF POLYCHAETE RESEARCH, Ira C. Darling Center for Research, Teaching, and Service, University of Maine, Walpole, Maine 04573. Obtained upon written request to polychaete workers; irregular.

SEA FRONTIERS, International Oceanographic Foundation, 10 Rickenbacker Causeway, Miami, Fla. 33149, $7.50, 6/year.

SEA SECRETS, International Oceanographic Foundation, 10 Rickenbacker Causeway, Virginia Key, Miami, Fla. 33149, free to members, 11/year.

THE SEAHORSE, Dillingham Corporation, Hydro Products Division, P.O. Box 2528, San Diego, Calif. 92112, free, 4/year.

SEAS, Booda News Enterprises, 2351 Research Blvd., Rockville, Md. 20850, $26, 52/year.

UNDERCURRENTS, a magazine for the commercial diving industry, P.O. Box 2383, New Orleans, La. 70116, $5, 12/year.

UNDERSEA TECHNOLOGY, Compass Publications, Suite 1000, 1117 N. 19th St., Arlington, Va. 22209, $8, 12/year.

THE UNDERWATER LETTER, Callahan Publications, P.O. Box 3751, Washington, D.C. 20007, $100, 36/year.

UNDERWATER NATURALIST, American Littoral Society, Sandy Hook Marine Laboratory, Highlands, N.J. 07732, $5 to members.

UNDERWATER SCIENCE AND TECHNOLOGY INFORMATION BULLETIN, Iliffe-NTP, INC., 300 East 42nd St., New York, N.Y. 10017, $35, 12/year.

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UST WASHINGTON LETTER OF OCEANOGRAPHY, Compass Publications, 1117 N. 19th St., Arlington, Va. 22209, $32, 26/year.

26°N, 80°W, Newsletter of University of Miami Rosenstiel School of Marine and Atmospheric Sciences, 10 Rickenbacker Causeway, Miami, Fla. 33149, free, 5/year.

REPORTS OF THE NATIONAL ACADEMY OF SCIENCES–NATIONAL RESEARCH COUNCIL

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BIOLOGY OF THE ANTARCTIC SEAS II, edited by George A. Llano (Vol. 5), Pub. 1297, 1965, ix, 280 pp., cloth, $12.

BIOLOGY OF THE ANTARCTIC SEAS III, edited by Waldo L. Schmitt and George A. Llano (Vol. 11), 290 pp., 1967, $13.50.

ARCTIC OCEAN, BASIC SCIENCE IN THE, Committee on Polar Research, 1963, 52 pp., paper, $1.50, Pub. 1068.

THE CRUST AND UPPER MANTLE OF THE PACIFIC AREA, by Leon Knopoff, Charles L. Drake, and Pembroke J. Hart; Geophysical Monograph No. 12, 1968, 522 pp., cloth bound, $24, AGU Pub. 1687.

A DIRECTORY OF OCEANOGRAPHERS IN THE UNITED STATES, 1969, 72 pp., $2.50.

ECONOMIC BENEFITS FROM OCEANOGRAPHIC RESEARCH, Committee on Oceanography, 1964, 50 pp., paper, $2, Pub. 1228.

ENERGY SYSTEMS OF EXTENDED ENDURANCE IN THE 1-100 KILOWATT RANGE FOR UNDERSEA APPLICATIONS, Pub. 1702, 1968, vii + 132 pp., paper, $4.50.

THE FEASIBILITY OF A GLOBAL OBSERVATION AND ANALYSIS EXPERIMENT, Pub. 1290, 1966, xvi + 172 pp., paper, $4.

OCEAN WAVE SPECTRA, A conference sponsored by the U.S. Navy Oceanographic Office and the Committee on Oceanography, 1963, 357 pp., cloth, $12.50. Order from Prentice-Hall, Inc., Englewood Cliffs, N.J.

OCEANOGRAPHY 1966: ACHIEVEMENTS AND OPPORTUNITIES, Pub. 1492, 1967 (xv) + 183 pp., paper, $5.

UNDERWATER PHYSIOLOGY, PROCEEDINGS, SECOND SYMPOSIUM ON, Feb. 1963, Washington, D.C., Mine Advisory Committee, 1963, 296 pp., paper, $4.00, Pub. 1181.

Russian Translations (order from the AGU)

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